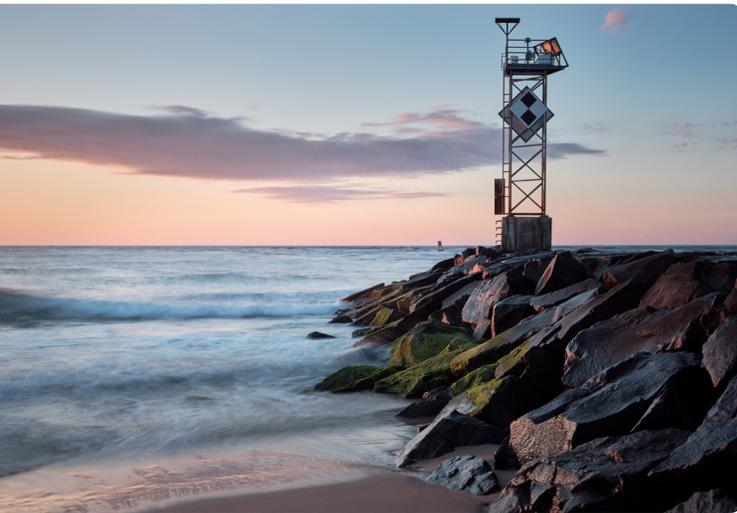




WATER AND SEWER RATE STUDY

Ocean City, Maryland



PREPARED BY:

**NewGen
Strategies & Solutions**

February 11, 2020

Chuck Bireley, CPA
Finance Director
Town of Ocean City
301 Baltimore Avenue
Ocean City, MD 21842

Subject: Water and Sewer Rate Study Results and Recommendations

Dear Mr. Bireley,

I am pleased to submit to the Town of Ocean City this report detailing the results of our Water and Sewer Rate Study. Contained within the report are specific policy and rate recommendations based on the current and future costs of providing the City's customers with quality water delivery and wastewater disposal service.

We appreciate the opportunity to work with you and the City on this project. We also commend the dedication and commitment of the City's Finance and Public Works staff whose contributions were essential to the project's completion.

Sincerely,



Eric Callocchia
Executive Consultant
NewGen Strategies and Solutions, LLC

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Section 1

PROJECT BACKGROUND AND SCOPE OF WORK

Study Background

The Town of Ocean City provides water and wastewater service to a small year-round population of about 7,800, which swells to a summer weekend population of more than 300,000. This drastic shift in population is evidenced by significant seasonal fluctuations in demand for water, which varies from an average consumption of 5.9 million gallons per day (MGD) to a summer peak of almost three times that quantity. Early in 1994, the Town also took control and ownership of the wastewater treatment plant and wastewater collection system serving the Town; previously, the wastewater system had been owned and operated by Worcester County, and the Worcester County Sanitary Commission. The wastewater system also has fluctuating seasonal demand, ranging from less than 3.0 MGD of flow in the winter to more than 14 MGD on a max day in the summer.

The City accounts for the provision of water and wastewater service in separate enterprise funds. The Water and Wastewater Funds are therefore supported only by the charges for each service.

In 2005, the City hired NewGen (then MFSG) to complete a water and sewer rate study to project the operating and capital costs of the City's systems and to develop utility charges that maintain the financial health of the City's Water and Sewer enterprise funds. This analysis was updated in 2010 and 2015. The City engaged NewGen to complete an update to the study in 2020 with the recommended rates spanning Fiscal Years (FY) 2021 through 2025.

Scope of Work

NewGen's scope of work included several tasks related to developing a cash flow model for both the water and wastewater funds. The model is dynamic and allows for various funding scenarios and changes in major assumptions. The water and sewer rate model has been developed and includes:

- The FY 2020 adopted operating budgets for the Water and Wastewater Funds
- The City's current Capital Improvement Plan for the water and wastewater systems
- The most recent (FY 2019) number of fixture counts and the units of water sold
- The current (end of FY 2019) unrestricted net position of the Water and Wastewater Funds

The current rate model was developed to project specific rate recommendations for FY 2021 through FY 2025; however, expenses and revenues are projected for the ten-year timeframe of FY 2020 through FY 2029. The detailed sections in this report show the first six years of the rate projection (FY 2020 through FY 2025). Section 6 of this report summarizes the long-term projections from FY 2020 through FY 2029. The estimated rate increases for FY 2026 through FY 2029 are provided for information only. The City will complete another update to the projections in 2025 in order to re-align the model with actual results and to develop specific rates for the period from FY 2026 through FY 2030.

Study Objectives and Guiding Principles

The following principles were used to guide the rate study and were developed with the assistance of City staff:

- The City's water and wastewater utilities must be financially self-supporting. It is assumed that the cost of operating and maintaining the systems will be supported by the fees and charges collected from customers with no financial support or subsidy from other City revenues.
- The City's utility rates shall be sufficient to ensure the funding of an appropriate level of system rehabilitation and replacement. The assumption that the City will continually reinvest in the water and wastewater systems to rehabilitate and replace assets as they reach the end of their useful lives is built into the analysis.
- The City shall maintain reserves in each Fund to provide for contingencies and unplanned expenses.
- Water and sewer rates shall be kept as low as possible over time. It is possible to keep rates low for a period by not investing sufficiently in the maintenance of the systems, but eventually the systems will deteriorate and require substantial investments leading to the need for significant and immediate rate increases.

The recommendations contained within this report satisfy each of these principles. The overall objective of the study is to maintain the balance between increased operating and capital costs of the City's utility systems and the financial impact on the users of the systems. While affordability is a concern, a vast majority of the City's utility costs are fixed. The total expenses of each system dictate the charges that need to be levied in order to support the long-term operation of each system. The study includes conservative assumptions in order to develop charges that can reasonably be believed to produce sufficient revenue over the next five years to support the utility systems.

Section 2 REVENUE REQUIREMENTS

The first step of any rate study is to account for and compile the costs of owning and operating the utility systems. The three cost components included in this analysis are: Operating and Maintenance, Capital Improvements, and Debt Service (both existing and future). These three cost components total to the amount needed each year to run the water and sewer systems. Each system’s expenses and revenues are accounted for separately.

Major Study Assumptions

In order to project the operating, debt service, and capital expenses of the City’s utility systems, several major assumptions must be made.

Operating Budget Escalation Factors

NewGen’s cost projections are based on the latest available actual data. In order to project future costs, escalation and inflation factors must be assumed. NewGen’s financial model includes the operating and maintenance budget line items each of which are assigned one of the inflation factors outlined in Table 2-1.

**Table 2-1
Operating Budget Escalation Factors**

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Inflation	1.50%	1.50%	1.50%	1.50%	1.50%
Energy	1.00%	1.00%	1.00%	1.00%	1.00%
Salaries	2.00%	2.00%	2.00%	2.00%	2.00%

On average, it is projected that each utility’s operating budget will increase 1.7% per year over the five-year projection period.

Minimum Water and Wastewater Unrestricted Net Position

As a part of the rate study, NewGen worked with City staff to develop a formal policy regarding the minimum Unrestricted Net Position (UNP) that are appropriate for the City’s utility funds. There are two components to the minimum recommendation:

- Operating Reserve – The minimum operating reserve balance shall be 60 days of annual Operating and Maintenance (O&M) expenses each year; and
- Capital Reserve – The minimum capital reserve balance shall be 2.0% of each system’s Net Book Value.

The minimum Unrestricted Net Position requirements are shown below in Table 2-2.

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**Table 2-2
Minimum Water and Wastewater Unrestricted Net Position Requirements**

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Water Fund						
60 Days O&M	\$884,000	\$899,000	\$914,000	\$930,000	\$946,000	\$962,000
2.0% NBV	\$484,000	\$493,000	\$512,000	\$596,000	\$798,000	\$1,200,000
Total Minimum UNP	\$1,368,000	\$1,392,000	\$1,426,000	\$1,526,000	\$1,744,000	\$2,162,000
Wastewater Fund						
60 Days O&M	\$1,390,000	\$1,414,000	\$1,438,000	\$1,463,000	\$1,488,000	\$1,513,000
2.0% NBV	\$1,214,000	\$1,299,000	\$1,221,000	\$1,225,000	\$1,259,000	\$1,218,000
Total Minimum UNP	\$2,604,000	\$2,713,000	\$2,659,000	\$2,688,000	\$2,747,000	\$2,731,000

The minimum Net Position requirement is a major driver of the financial plans detailed in this report. Rates and fees are set in order to cover the operating, debt service, and capital needs of the system, as well as to maintain the minimum Net Position balances shown above. If at any time the projected rates each year would not sustain the minimum Net Position at the end of the Fiscal Year, it is assumed that rates must be adjusted to, at a minimum, achieve the minimum required Net Position.

Operating Expenses

**Table 2-3
Water Operating Expenses**

	Budget FY 2020	Projected FY 2021	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025
Administration	\$1,040,621	\$1,057,276	\$1,074,202	\$1,091,404	\$1,108,885	\$1,126,650
Distribution	\$1,576,930	\$1,603,973	\$1,631,488	\$1,659,486	\$1,687,974	\$1,716,962
Plant	\$2,333,582	\$2,373,907	\$2,414,943	\$2,456,704	\$2,499,203	\$2,542,452
Meter Reading	\$270,635	\$275,813	\$281,092	\$286,472	\$291,957	\$297,547
Meter Installation	\$154,324	\$156,821	\$159,359	\$161,938	\$164,560	\$167,226
Total Operating Expenses	\$5,376,092	\$5,467,790	\$5,561,084	\$5,656,004	\$5,752,579	\$5,850,837
\$ Change		\$91,698	\$93,295	\$94,920	\$96,574	\$98,258
% Change		1.7%	1.7%	1.7%	1.7%	1.7%

**Table 2-4
Wastewater Operating Expenses**

	Budget FY 2020	Projected FY 2021	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	
Administration	\$1,554,146	\$1,579,371	\$1,605,012	\$1,631,077	\$1,657,572	\$1,684,506	
Plant	\$5,405,977	\$5,497,477	\$5,590,585	\$5,685,330	\$5,781,741	\$5,879,849	
Collection System	\$1,151,665	\$1,172,957	\$1,194,651	\$1,216,756	\$1,239,279	\$1,262,229	
Lab	\$344,810	\$351,457	\$358,234	\$365,142	\$372,185	\$379,364	
Total Operating Expenses	\$8,456,598	\$8,601,262	\$8,748,482	\$8,898,305	\$9,050,777	\$9,205,948	
		\$ Change	\$144,664	\$147,220	\$149,823	\$152,473	\$155,171
		% Change	1.7%	1.7%	1.7%	1.7%	1.7%

Existing Debt Service

From time to time the City issues debt to finance capital improvements of its water and wastewater systems. Currently, the City has six outstanding debt obligations related to the water and wastewater systems. The total annual payments for each debt obligation are shown in Table 2-5.

**Table 2-5
Existing Water and Wastewater Debt Service**

	Budget FY 2020	Projected FY 2021	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025
2009 GO Bonds	\$1,028,331	\$1,029,643	\$ -	\$ -	\$ -	\$ -
2010 BAB Bonds	\$617,132	\$615,320	\$615,346	\$610,778	\$612,579	\$610,453
2012 GO Bonds	\$1,183,040	\$1,181,403	\$1,183,224	\$1,180,663	\$1,177,822	\$1,176,239
2013 GO Bonds	\$158,531	\$157,814	\$156,910	\$157,348	\$157,546	\$0
2015 GO Bonds	\$1,158,850	\$1,151,725	\$1,143,350	\$1,138,600	\$1,127,475	\$1,124,850
2016A GO Series	\$208,860	\$290,864	\$291,271	\$290,702	\$290,048	\$291,058
Total Debt Service	\$4,354,743	\$4,426,768	\$3,390,100	\$3,378,091	\$3,365,472	\$3,202,600
Water Debt Service	\$679,098	\$687,592	\$419,421	\$417,831	\$414,315	\$413,570
Sewer Debt Service	\$3,675,645	\$3,739,177	\$2,970,679	\$2,960,260	\$2,951,156	\$2,789,029

Most of the City’s current utility related debt is allocated to the wastewater system.

Capital Improvement Plan

A major component of owning and operating a utility is the planning for the rehabilitation and replacement of the system’s assets over time. The City has an adopted ten-year capital improvement plan (CIP) for both the water and wastewater systems. The following tables detail the projects in the City’s FY 2020 through FY 2025 CIP.

Section 2

**Table 2-6
Water Capital Improvement Plan**

	Budget FY 2020	Projected FY 2021	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025
Water Main Upgrades	\$200,000	\$300,000	\$300,000	\$300,000	\$300,000	\$350,000
Disinfection By-Product	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
66th St. WTP (10 D/E)	\$144,291					
100th St. Pump Station		\$75,000				
New Water Mains for 66th Street WTP		\$150,000				
Gorman Ave. Plant	\$1,950,000					
66th Bayside Mains		\$250,000				
66th Street WTP (10% to 35% Phases)			\$1,000,000			
66th Street WTP (65% to 95% Phases)				\$1,250,000		
66th St. WTP Raw Water Mains				\$3,000,000		
66th St. WTP Final Design					\$250,000	
Construction of 66th St. WTP					\$10,000,000	
Caustic Tanks (Gorman Ave.)						\$250,000
New Water Tower at 44th St. (Planning)						\$150,000
66th St. Water Plant Completion						\$20,000,000
Total Water CIP	\$2,444,291	\$925,000	\$1,450,000	\$4,700,000	\$10,700,000	\$20,900,000

The water system's CIP contains both ongoing asset maintenance projects and one-time major projects to improve and/or replace existing assets. The major investment planned for the water system over the five-year timeframe is the development and construction of a new water treatment plant at 66th Street, which will replace the 44th Street plant currently in operation.

**Table 2-7
Wastewater Capital Improvement Plan**

	Budget FY 2020	Projected FY 2021	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025
Sewer Mains	\$1,381,555	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$500,000
Treatment Plant Concrete Repairs	\$200,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Disinfection Upgrade - Phase III	\$365,000					
Ocean Outfall inspection	\$75,000					
Secondary Clarifier Rehabilitation	\$350,000	\$4,250,000				
Bio-Solids Process Rehabilitation		\$750,000	\$750,000			
Pumps and Control Upgrade			\$250,000			
Montego Bay Pump Station			\$100,000	\$250,000		
VSPA Upgrade				\$750,000		
2 nd St Pump Station Force Main Lining				\$300,000	\$3,000,000	
Aeration Tank Improvements						\$200,000
VPSA Replacement						\$1,750,000
Total Wastewater CIP	\$2,371,555	\$6,600,000	\$2,700,000	\$2,900,000	\$4,600,000	\$2,550,000

The wastewater system’s CIP includes several rehabilitation projects for the City’s wastewater infrastructure.

Projected Debt Service

The City’s water and wastewater CIPs include several major projects that will be financed with long-term debt. The use of long-term debt as a financing instrument for major utility capital investments allows the City to spread the cost of long-lived assets over time. This concept is called intergenerational equity. The new assets being constructed in the five-year timeframe are going to be used and useful for a long period of time. By spreading the cost of these assets over time via the use of debt, the City can more appropriately collect revenues from both current and future users of the assets. Table 2-8 shows the existing and additional debt service projections included in the study. Projects costing \$1.0 million or more are assumed to be financed with General Obligation (GO) Bonds with 20-year maturity at 4.0% interest. These financing terms are extremely conservative.

**Table 2-8
New Debt Service Projection**

	Budget FY 2020	Projected FY 2021	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025
Existing Water Debt Service	\$679,098	\$687,592	\$419,421	\$417,831	\$414,315	\$413,570
New Water Debt Service	\$ -	\$145,637	\$220,322	\$537,735	\$1,284,590	\$2,778,300
Total Projected Debt Service	\$679,098	\$833,228	\$639,743	\$955,567	\$1,698,905	\$3,191,870
Existing Sewer Debt Service	\$3,675,645	\$3,739,177	\$2,970,679	\$2,960,260	\$2,951,156	\$2,789,029
New Sewer Debt Service	\$ -	\$317,413	\$317,413	\$317,413	\$541,470	\$541,470
Total Projected Debt Service	\$3,675,645	\$4,056,590	\$3,288,092	\$3,277,673	\$3,492,626	\$3,330,499

Miscellaneous Non-Rate Revenues

In order to identify the revenue needed from water and wastewater rates, i.e. the Net Revenue Requirement, it is necessary to account for the various non-rate revenues collected by the City. These revenues include Capacity Fees and Connection Charges, as well as interest on reserves and the sale of materials and service. The total budgeted FY 2020 non-rate revenue for the water system is \$330,300 and for the wastewater system is \$573,350.

West Ocean City Wastewater Service

The City receives payment for providing collection and treatment services to West Ocean City (WOC). The payment is based on an agreement with Worcester County that the City reserve 1.0 MGD for service to WOC. Based on the City’s wastewater treatment capacity of 14.0 MGD, WOC pays 7.14% (1/14) of the City’s applicable wastewater capital costs and operating costs based on its percentage of flows. In 2019, 10.59% of flows were from West Ocean City. The 1.0 MGD limit is an annual average. The actual daily flows from WOC range from 0.6 to 0.8 MG. If flows meet or exceed the 1.0 MGD annual average, then WOC would need to either invest in its own treatment capacity or re-negotiate an increase in its reservation of the City’s capacity. This study assumes that the reservation capacity of WOC remains at 1.0 MGD.

As the City’s operating and capital costs increase, so does the annual fee assessed for service to WOC. Based on the projections in the updated model, the fees for WOC are projected to be as follows for the five-year projection period.

**Table 2-9
Projected Annual Charges to West Ocean City**

	Budget FY 2020	Projected FY 2021	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025
Annual Charge for 1.0 MGD Capacity	\$835,000	\$886,054	\$892,672	\$886,675	\$931,675	\$907,737

Revenue Requirement Projection

Based on the latest available operating, debt service, and capital expense data and the assumptions detailed above, NewGen developed the net revenue requirement forecasts under each scenario described above. Exhibit 2-10.

**Table 2-10
Water Net Revenue Requirement Projection**

	Budget FY 2020	Projected FY 2021	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025
Operating Expenses	\$5,376,092	\$5,467,790	\$5,561,084	\$5,656,004	\$5,752,579	\$5,850,837
Existing Debt Service	\$679,098	\$687,592	\$419,421	\$417,831	\$414,315	\$413,570
Cash Funded Capital Projects	\$494,291	\$925,000	\$450,000	\$450,000	\$700,000	\$900,000
New Debt Service	\$ -	\$145,637	\$220,322	\$537,735	\$1,284,590	\$2,778,300
Total Revenue Requirement	\$6,549,481	\$7,226,018	\$6,650,828	\$7,061,571	\$8,151,484	\$9,942,707
Less: Miscellaneous Revenues	(\$330,300)	(\$331,952)	(\$333,611)	(\$335,279)	(\$336,956)	(\$338,640)
Net Revenue Requirement	\$6,219,181	\$6,894,066	\$6,317,216	\$6,726,292	\$7,814,529	\$9,604,067

The water system’s net revenue requirement increases significantly over the five-year projection due to the increased capital investments in the water system. The system’s projected new debt service accounts for most of the increase in the costs of operating and maintaining the water system.

Section 2

Table 2-11
Wastewater Net Revenue Requirement Projection

	Budget FY 2020	Projected FY 2021	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025
Operating Expenses	\$8,456,598	\$8,601,262	\$8,748,482	\$8,898,305	\$9,050,777	\$9,205,948
Existing Debt Service	\$3,675,645	\$3,739,177	\$2,970,679	\$2,960,260	\$2,951,156	\$2,789,029
Cash Funded Capital Projects	\$2,371,555	\$2,350,000	\$2,700,000	\$2,900,000	\$1,600,000	\$2,550,000
New Debt Service	\$ -	\$317,413	\$317,413	\$317,413	\$541,470	\$541,470
Total Revenue Requirement	\$14,503,798	\$15,007,852	\$14,736,574	\$15,075,978	\$14,143,404	\$15,086,447
Less: Miscellaneous Revenues	(\$573,350)	(\$576,217)	(\$579,098)	(\$581,993)	(\$584,903)	(\$587,828)
Less: Charges to WOC	(\$835,000)	(\$886,054)	(\$892,672)	(\$886,675)	(\$931,675)	(\$907,737)
Net Revenue Requirement	\$13,095,448	\$13,545,581	\$13,264,804	\$13,607,309	\$12,626,825	\$13,590,883

The wastewater system's net revenue requirement remains relatively steady over the five-year projection.

In order to project the appropriate rates and fees for each system, the rate base, i.e. customer base, of each system must be established. The next section of this report details the basis on which the City charges its water and wastewater customers.

Section 3

CUSTOMERS AND CONSUMPTION

The City’s customer base varies wildly over seasonal periods. The City’s year-round customer base is about 8,000 residents and many restaurants and businesses close over the winter season. On peak summer weekends, the City’s population swells to over 300,000 people with hundreds of restaurants, bars, and other businesses open to serve them. The seasonal variation in customers creates operational and financial challenges for the City. The City’s system must be maintained year-round, regardless of the actual water consumption of its customers.

Current Customer Base

The City bills on a quarterly basis in three cycles, meaning that 1/3 of the City’s customer base is billed each month. Over the course of a year, each cycle receives four bills that account for a full year of service.

The City has four retail rate categories:

- **Fixtures:** The City collects two fixed quarterly fees based on the number of plumbing fixtures being served at each account; one for water service and one for sewer service. A plumbing fixture is any exchangeable device which can be connected to a plumbing system to deliver and drain water, e.g. bathtub/showers, sinks, toilets, etc.
- **Vacant Lots:** Any vacant lot in the City’s service area is charged two fixed quarterly fees in lieu of fixture fees; one for water service and one for sewer service. This fee accounts for the fact that the City maintains the water and sewer infrastructure adjacent to vacant lots whether service is being provided at that lot. If at any time a vacant lot is developed, the fixtures built on the property are counted as part of the building permit process and the property is then charged fixture fees on subsequent bills.
- **Pools:** The City charges accounts with pools a quarterly fee for each pool. The revenue from this fee is allocated to the wastewater system.
- **Water Consumption:** The only variable fee that the City charges is a volumetric rate based on each water account’s water consumption. The fee is stated as a rate per 1,000 gallons.

The most recent full year of consumption data available for the study is FY 2019. Table 3-1 shows the billable units in each rate category in FY 2019.

Table 3-1
FY 2019 Rate Base by Category

Rate Category	Number of Units
Water and Sewer Fixtures	337,931
Water and Sewer Vacant Lots	495
Pools	285
Water Consumption (1,000 Gallons)	965,898



Projected Customer Base

In order to project the revenues of the water and wastewater systems in the future, assumptions about customer growth and/or decline must be made. Although the City is expected to grow in the near term (next five to ten years), the City has historically made conservative assumptions when planning the financial projections of its utility funds. NewGen’s model uses conservative assumptions regarding the future growth of the City’s customer base.

- **Fixture Count:** NewGen’s model assumes that the number of fixtures within the City’s water and wastewater will grow at a rate of 1.0% per year, which equal to about 300 residential accounts, assuming the average residential account has 11 fixtures.
- **Vacant Lots:** NewGen’s model assumes that the number of vacant lots will decrease by 0.5% per year, equal to about 2 lots per year.
- **Water Consumption:** Although a conservative amount of customer growth is built into NewGen’s model, the model also assumes that there will be no growth in water consumption. This is due to the national trend of water conservation resulting in per capita water consumption decreases of 1.0% to 2.0% per year. Therefore, NewGen projects that although the number of fixtures within the City’s system will increase, water consumption will remain flat at FY 2019 levels.

Table 3-2 shows the projected customer base for each system.

**Table 3-2
Projected Rate Base by Category**

	Budget FY 2020	Projected FY 2021	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025
Water and Sewer Fixtures	341,310	344,723	348,170	351,652	355,169	358,720
Water and Sewer Vacant Lots	493	490	488	485	483	480
Pools	288	291	294	297	300	303
Water Consumption (1,000 Gallons)	965,898	965,898	965,898	965,898	965,898	965,898

Section 4 FINANCIAL PLAN AND RECOMMENDED RATES

Financial Projections Under Current Rates

The baseline analysis performed as a part of the study was the financial projections under the proposed expenses detailed in Section 2 of this report under the assumption that the City does not increase the water or wastewater rates charged to customers. The City’s current FY 2020 rates are summarized below.

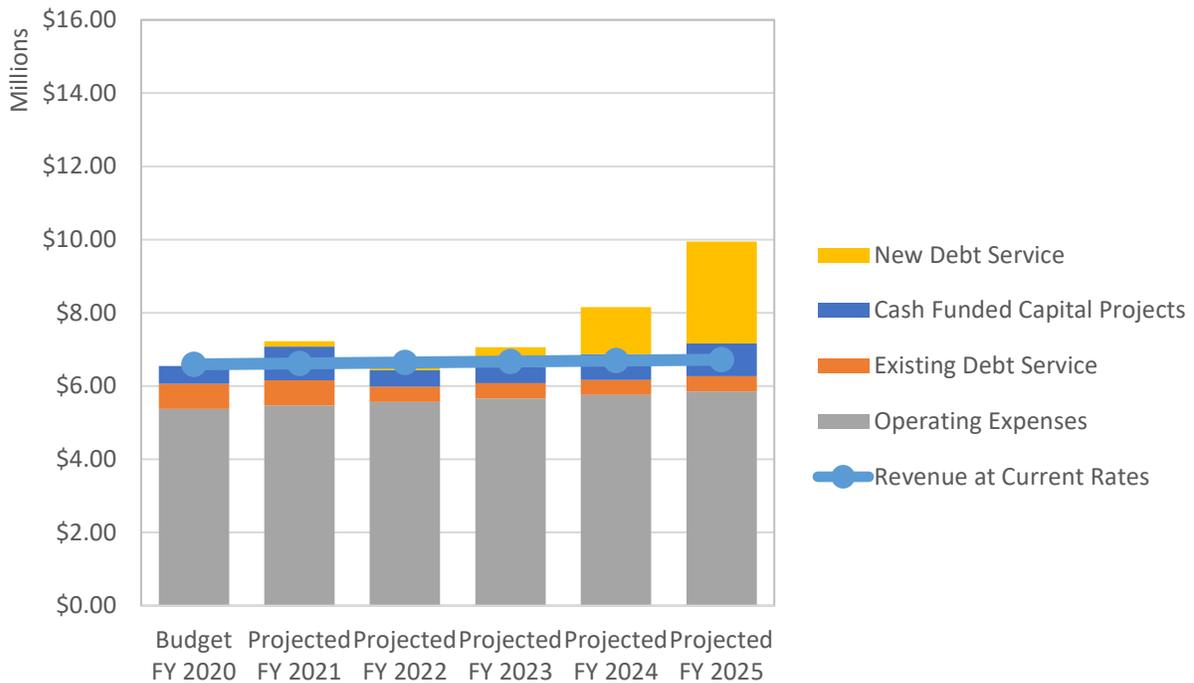
**Table 4-1
Current FY 2020 Quarterly Water and Wastewater Rates**

Rate Category	Water Rate	Wastewater Rate
Fee per Fixture	\$1.60	\$9.60
Fee per Vacant Lot	\$9.60	\$23.10
Fee per Pool	-	\$48.00
Water Consumption (per 1,000 Gallons)	\$4.20	-

Water System Cash Flow and Net Position Projections Under Current Rates

Based on the FY 2020 rates detailed above, the water utility cannot be self-supporting over the next five fiscal years (FY 2021 – FY 2025), as shown in Exhibit 4-2.

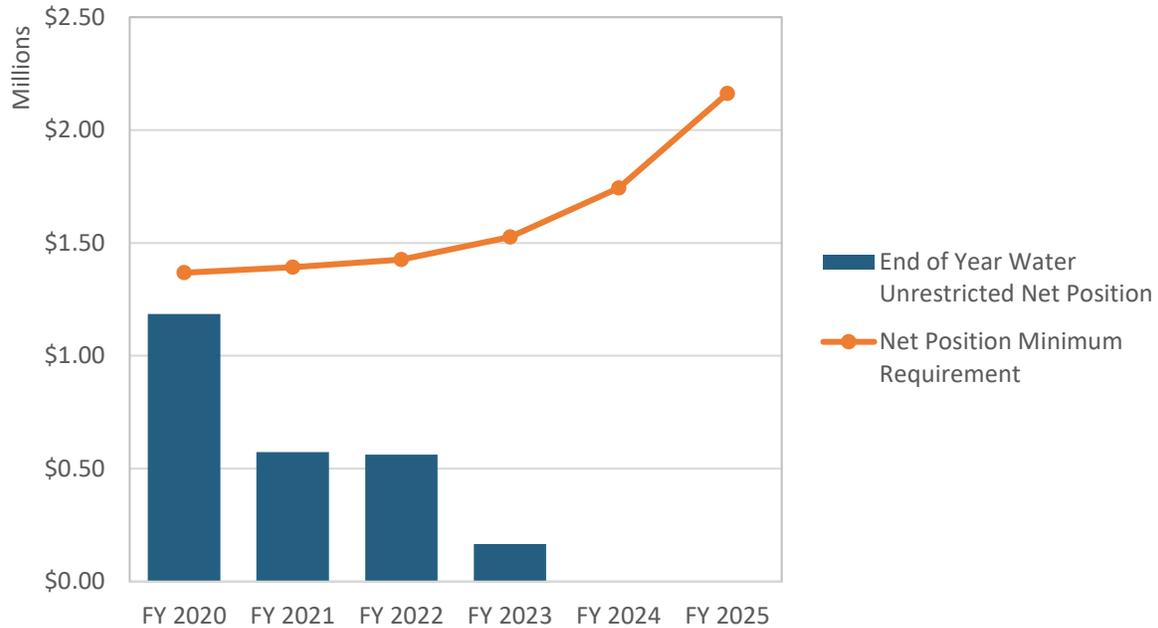
Exhibit 4-2 Water Expenses vs. Revenues at Current FY 2020 Rates



Section 4

The projected cash deficits would exhaust the utility's net position in FY 2024 as shown in Exhibit 4-3.

Exhibit 4-3 Projected Water Utility Net Position Under Current FY 2020 Rates

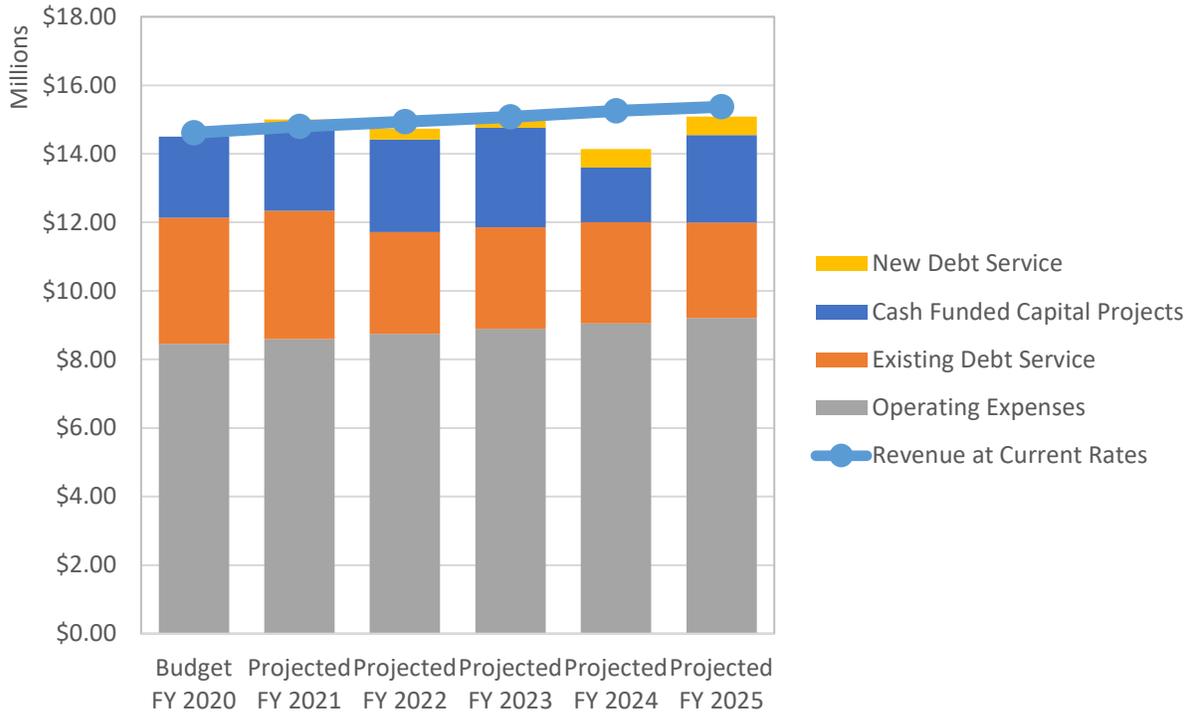


The current FY 2020 water rates cannot support the projected operating, capital, debt service, and reserve requirements of the water system.

Wastewater System Cash Flow and Net Position Projections Under Current Rates

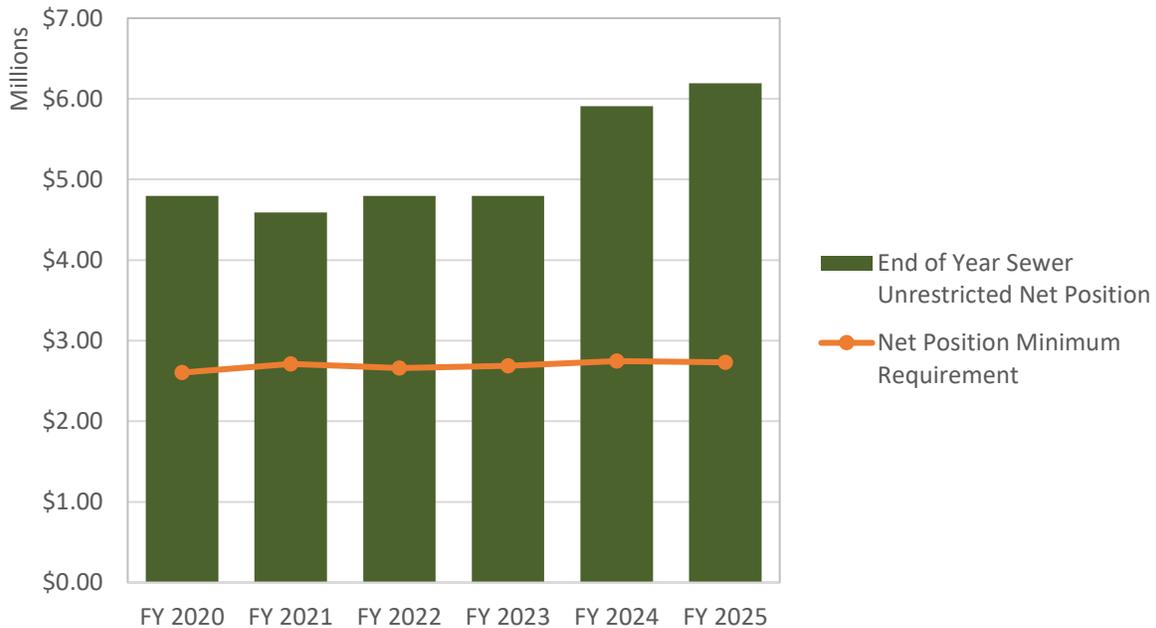
Based on the FY 2020 rates detailed above, the wastewater utility can be self-supporting over the next five fiscal years (FY 2021 – FY 2025), as shown in Exhibit 4-4.

Exhibit 4-4 Wastewater Expenses vs. Revenues at Current FY 2020 Rates



The projected cash flow would maintain the wastewater utility’s net position over the entire five-year projection period as shown in Exhibit 4-5.

Exhibit 4-5 Projected Wastewater Utility Net Position Under Current FY 2020 Rates



The current FY 2020 wastewater revenues can support the projected operating, capital, debt service, and reserve requirements of the wastewater system over the entire projection period.

Recommended Financial Plan

In order to increase revenues that will sustain the water system, NewGen developed a multi-year adjustment plan for the City’s water rates.

Recommended Water Rates

The implementation of NewGen’s rate recommendations will result in rates that generate enough revenue to fund the water utility system. The recommended water rates are shown in Table 4-6 below.

**Table 4-6
Recommended Quarterly Water Rates**

	Current FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Water Rate Increase		7.0%	7.0%	7.0%	7.0%	7.0%
Fee per Fixture	\$1.60	\$1.70	\$1.80	\$1.95	\$2.10	\$2.25
Fee per Vacant Lot	\$9.60	\$10.25	\$10.95	\$11.70	\$12.50	\$13.40
Water Consumption (per 1,000 Gallons)	\$4.20	\$4.50	\$4.80	\$5.15	\$5.50	\$5.90

Note: Rates are rounded to the nearest \$0.05.

Water Cash Flow and Fund Balance Projections Under Recommended Rates

The recommended water rates allow the City’s water utility to be self-supporting in each of the five projection years. The cash flow and net position projections for the water utility system are shown in Exhibits 4-7 and 4-8.

Exhibit 4-7 Water System Expenses vs. Revenues Under Recommended Rates

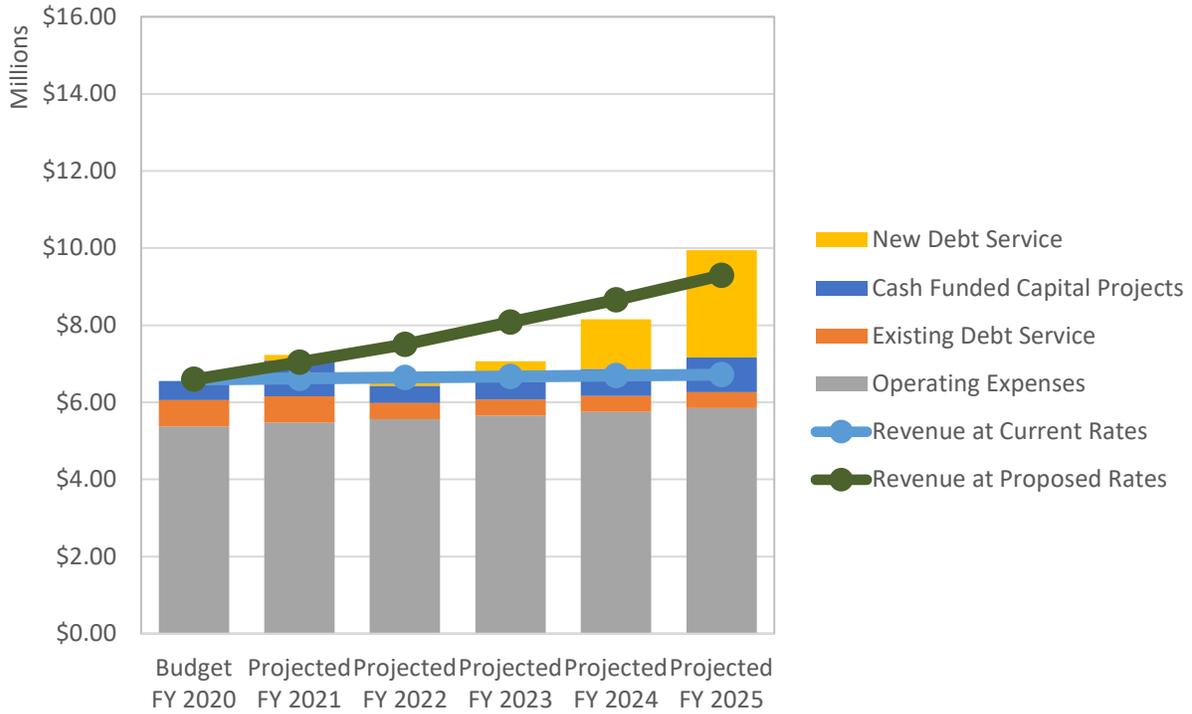
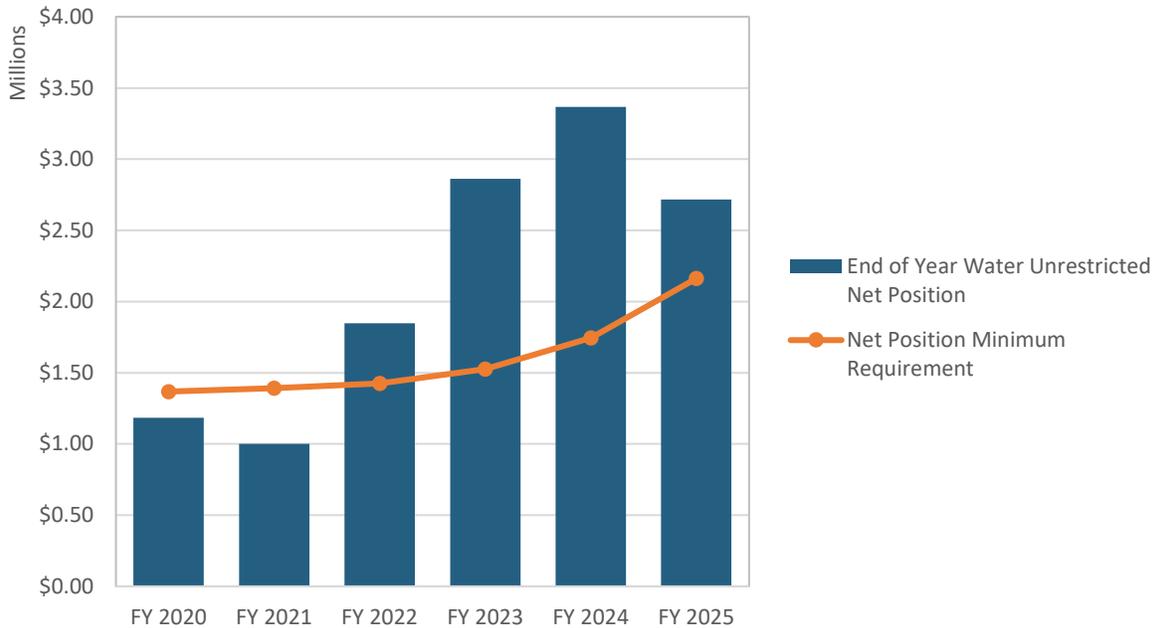


Exhibit 4-8 Projected Water Utility Net Position Under Recommended Rates



The recommended water rate increases would allow for incremental increases in the Water Fund net position in preparation for the increase in debt service in FY 2024 and beyond. Spreading the increase in revenues over a period of five years allows both the City and the City’s customers to adjust to the increased costs over a period rather than all at once.

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Recommended Wastewater Rates

The recommended wastewater rates are shown in Table 4-9 below.

**Table 4-9
Recommended Quarterly Wastewater Rates**

	Current FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Wastewater Rate Increase		0.0%	0.0%	0.0%	0.0%	0.0%
Fee per Fixture	\$9.60	\$9.60	\$9.60	\$9.60	\$9.60	\$9.60
Fee per Vacant Lot	\$23.10	\$23.10	\$23.10	\$23.10	\$23.10	\$23.10
Fee per Pool	\$48.00	\$48.00	\$48.00	\$48.00	\$48.00	\$48.00

Note: Rates are rounded to the nearest \$0.05.

Wastewater Cash Flow and Fund Balance Projections Under Recommended Rates

The recommended wastewater rates, which are equal to the existing wastewater rates, are projected to fully fund the operating, capital, and reserve requirements of the wastewater system. Exhibits 4-10 and 4-11 show the five-year projection of cash flows and net position of the City's Wastewater Fund.

Exhibit 4-10 Wastewater System Expenses vs. Revenues Under Recommended Rates

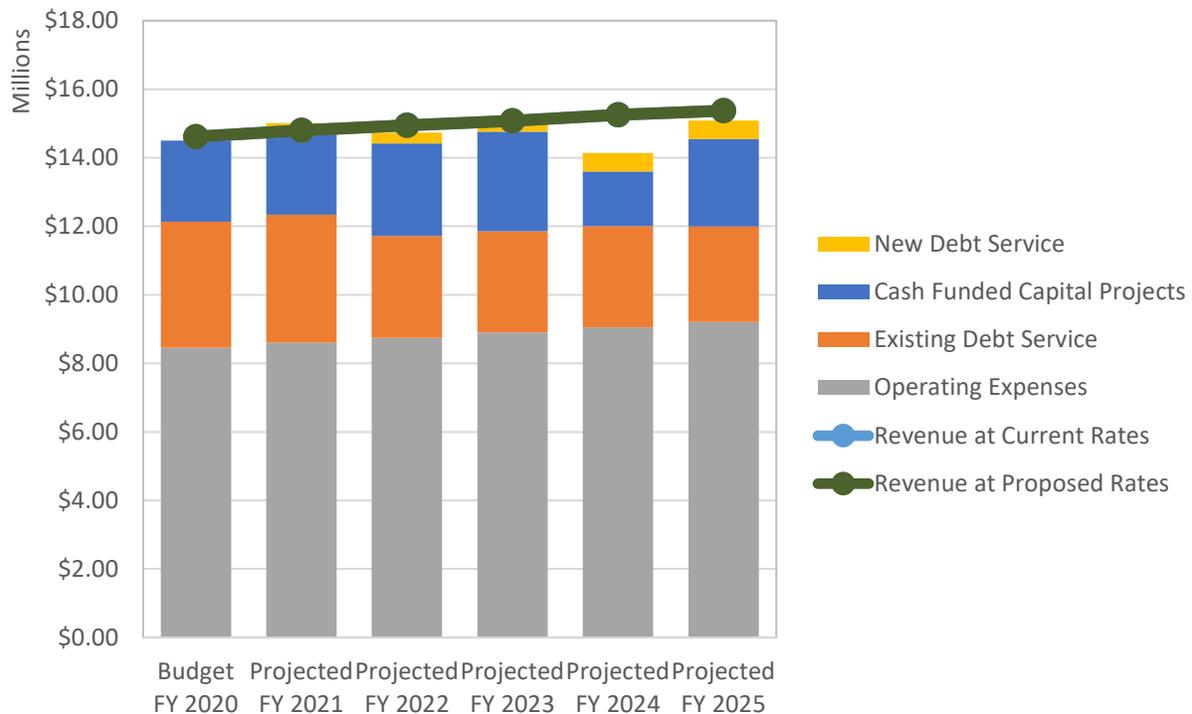
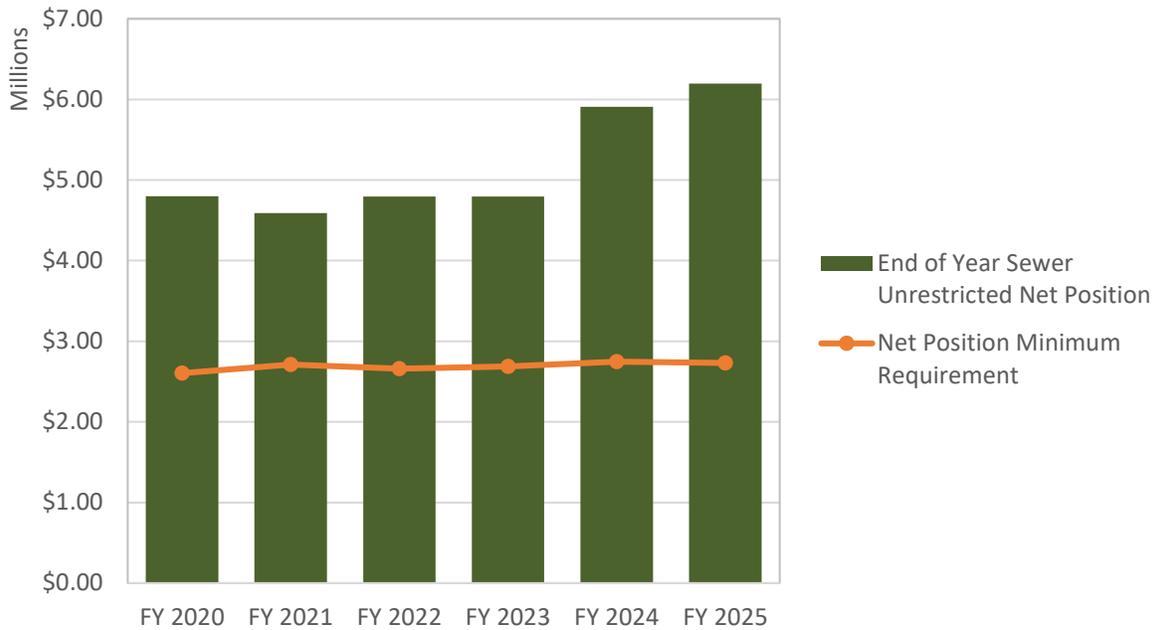


Exhibit 4-11 Projected Wastewater Utility Net Position Under Recommended Rates



As shown previously, the current FY 2020 wastewater revenues can support the projected operating, capital, debt service, and reserve requirements of the wastewater system over the entire projection period.

Section 5 CUSTOMER BILL IMPACTS AND COMPARISONS

A major consideration when developing any utility financial plan is the impact on the system’s customer bills. The recommendations detailed in this report will result in revenue increases, and therefore cost increases to the system’s customers. This section will outline the impact on the system’s median customer and a comparison of the total customer bill as compared to surrounding utilities.

Retail Customer Bill Impact

Table 5-1 below shows the impact on customer bills for the median customer in each meter size throughout the City.

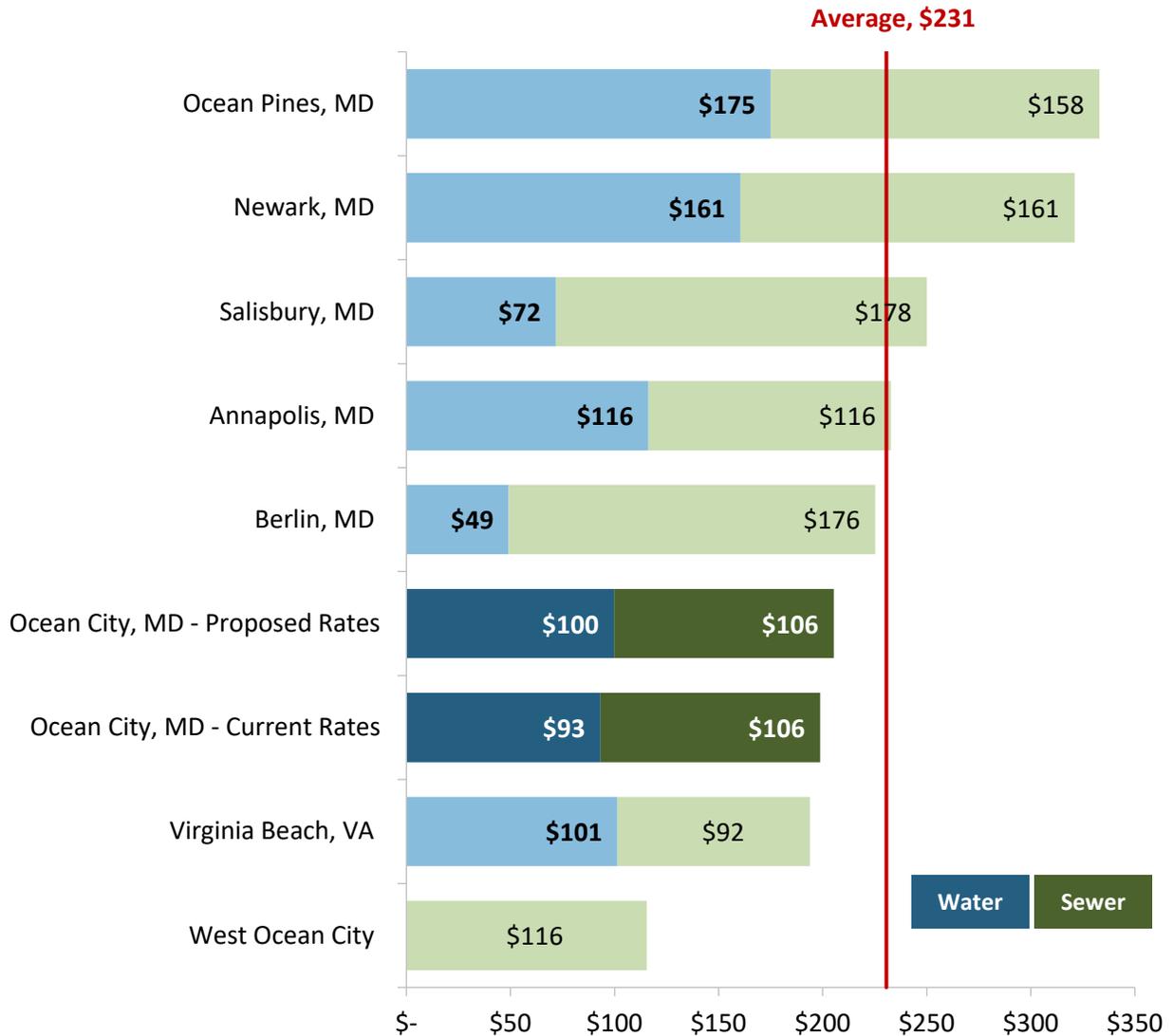
**Table 5-1
Projected Average Residential Customer Bill: 11 Fixtures, 18,000 Gallons**

	Current FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Water Bill	\$93.20	\$99.70	\$106.20	\$114.15	\$122.10	\$130.95
Wastewater Bill	\$105.60	\$105.60	\$105.60	\$105.60	\$105.60	\$105.60
Total Quarterly Bill	\$198.80	\$205.30	\$211.80	\$219.75	\$227.70	\$236.55
<i>\$ Change</i>		\$6.50	\$6.50	\$7.95	\$7.95	\$8.85
<i>% Change</i>		3.3%	3.2%	3.8%	3.6%	3.9%

Regional Bill Comparison

The following exhibit shows a comparative bill for an average City residential customer (11 fixtures, 18,000 gallons of quarterly consumption) in surrounding service areas.

Exhibit 5-2 Sample Customer Bill, 11 Fixtures, 18,000 Gallons Quarterly Usage



While regional comparisons may provide some context, the ranking of individual customer bills is not a consideration when developing a financial plan and rate structure. The City's cash needs are independent of the rates in the surrounding jurisdictions, and this comparison is provided for information only.

Section 6 LONG-TERM PROJECTIONS

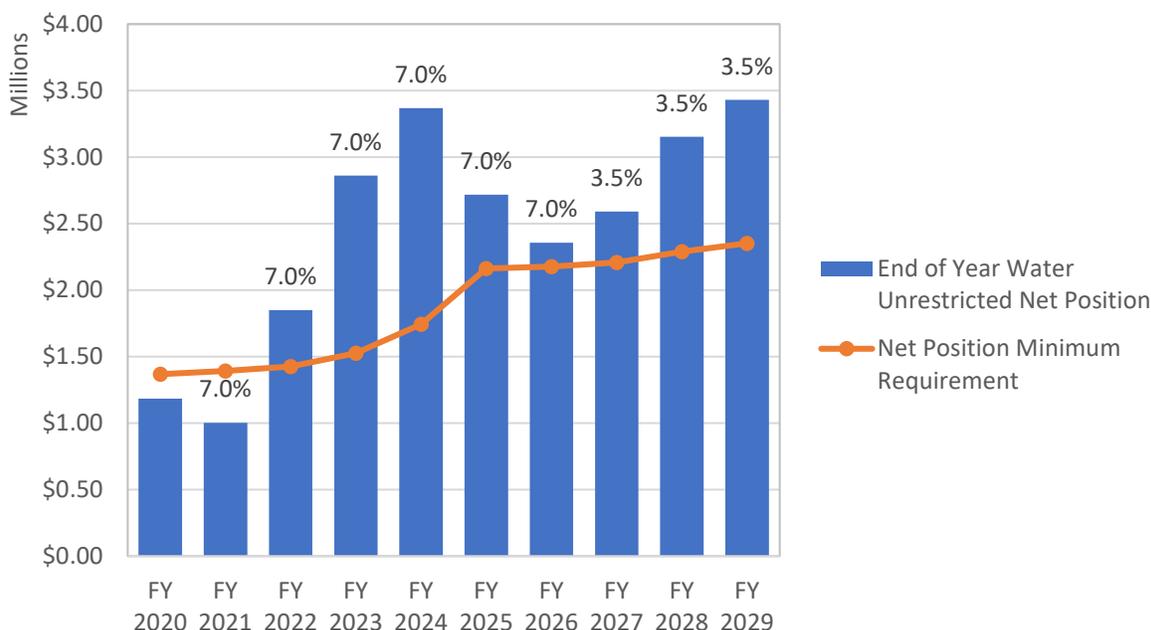
The tables and charts presented in this report detail the first five years of NewGen’s study period. The full study period extends to FY 2029. The long-term financial health of the utilities was considered when recommending the five-year rate plan in Section 4 of this report.

Long-Term Water Net Position Projection

The long-term projection for the Water system considers the detailed analysis in this report as well as the following long-term assumptions for FY 2026 through FY 2029:

- Water O&M cost escalation of 1.7% per year
- 1.0% Water fixture growth per year
- 0.0% Water consumption growth per year
- Total FY 2026 through FY 2029 water capital projects totaling \$11.05 million
 - \$3.45 million cash funded
 - \$7.60 million debt funded

Exhibit 6-1 Long-Term Water Net Position Projection with Rate Increase Percentage



NewGen’s long-term water rate projections assume an additional rate increase of 7.0% in FY 2026 and then rate increases of 3.5% in each year from FY 2027 through FY 2029. Under the current model’s assumptions, the net position of the water fund over that period remains above the recommended minimum.

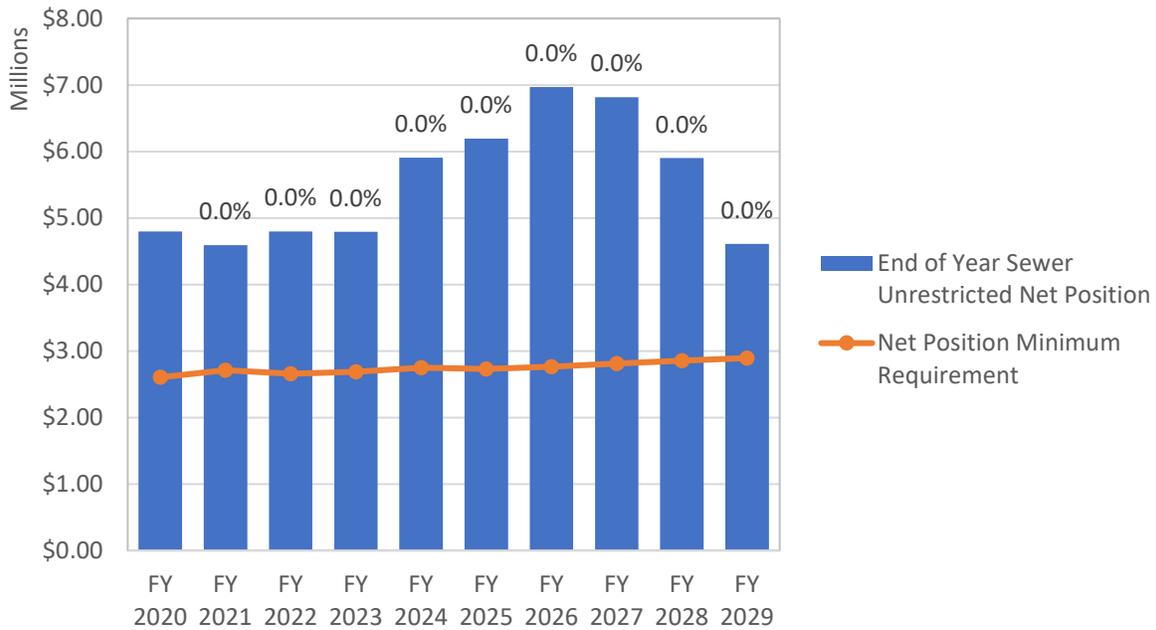


Long-Term Wastewater Net Position Projection

The long-term projection for the wastewater system considers the detailed analysis in this report as well as the following long-term assumptions for FY 2026 through FY 2029:

- Wastewater O&M cost escalation of 1.7% per year
- 1.0% wastewater fixture growth per year
- Total FY 2026 through FY 2029 wastewater capital projects totaling \$16.08 million, 100% cash funded

Exhibit 6-2 Long-Term Wastewater Net Position Projection with Rate Increase Percentage



NewGen’s current model shows that wastewater rates can remain at FY 2020 levels for FY 2021 through FY 2029 and the wastewater net position will be above the recommended minimum. However, the sharp decreases in net position in FY 2028 and FY 2029 show that rates will likely need to be adjusted during the City’s next rate study in 2025.